

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of

SAKATA ET AL.

Application No. 10/574,574            Group Art Unit 1796

Filed April 4, 2006

Examiner Mr./Mrs. MICHAEL PEPITONE

For: RESIN COMPOSITION FOR LASER WELDING AND MOLDED  
ARTICLE

DECLARATION UNDER RULE 1.132

Honorable Commissioner of Patent and Trademarks,  
Washington, D.C.

Sir,

I, Koichi SAKATA, declare:

That I am a citizen of Japan, residing at Fuji-shi,  
Shizuoka, Japan;

That I was born on March 29, 1969 in Tokyo and  
graduated from the Department of Graduate School of  
Engineering, Kanazawa University, Japan in March 1994;

That I have been employed by Polyplastics Co.,  
Ltd., JAPAN since 1994 and worked at Technical Service  
Center of Polyplastics Co., Ltd.;

That I currently work at Research and Development  
Center of Polyplastics Co., Ltd. as the senior

researcher; and

That the following experiments were conducted under my direct supervision;

### **EXPERIMENT**

I investigated differences between the process of the present invention and the process with the non-modified PBT-series copolymer composition.

Incidentally, the following Comparative Examples A and B were performed in the same manner as Examples 3 and 7 described in the present specification except for varying the kind of PBT-series resin (A).

(Comparative Examples A and B)

In the following Comparative Examples, the following PBT-series resin (A), elastomer (B), polycarbonate-series resin (C), plasticizer (D), and filler or reinforcing agent (E) were used.

PBT-series resin (A)

(A-2) PBT resin [manufactured by Polyplastics Co., Ltd., "DURANEX 2000"]

Elastomer (B)

(B-2) Polyester-series thermoplastic elastomer [manufactured by Toyobo Co., Ltd., "GP200"]

(B-3) Polystyrene-series thermoplastic elastomer [manufactured by Kuraray Co., Ltd., "SEPTON 4055"]

Polycarbonate-series resin (C)

(C-1) Polycarbonate resin [manufactured by Teijin Chemicals Ltd., "PANLITE L-1225"]

Plasticizer (D)

(D-1) Aromatic polycarboxylic acid ester  
[manufactured by Asahi Denka Co., Ltd., "ADK CIZER UL-100"]

Filler or reinforcing agent (E)

(E-1) Glass fiber [manufactured by Nitto Boseki Co., Ltd., "CS3J-948S", mean fiber diameter:  $\phi 11 \mu\text{m}$ , and mean fiber length:  $400 \mu\text{m}$ ]

Components were kneaded by using a biaxial extruder (manufactured by Japan Steel Works, Ltd.,  $30 \text{ mm}\phi$ ) at  $260^\circ\text{C}$  in a proportion (weight ratio) shown in Table 1 to prepare a pellet. Thus obtained pellet was injection-molded into a test piece "A" (80 cm in length, 80 cm in width and 2 mm in thickness, side gate, gate width: 2 mm) by an injection molding machine (manufactured by Toshiba Corporation) under a condition of a cylinder temperature of  $260^\circ\text{C}$  and a mold temperature of  $80^\circ\text{C}$ .

Regarding the test pieces, airtightness (uniform weldability) and light transmittance of were evaluated in the same manner as Examples described in the present specification.

The results of Comparative Examples A and B are

shown in Table 1. Incidentally, the evaluations of Examples 3 and 7 of the present specification also were described for comparison.

[Table 1]

Table 1

	Examples		Comparative Examples	
	3	7	A	B
(A) PBT-series resin				
(A-1) DMI-modified PBT resin	100	100		
(A-2) PBT resin			100	100
(B) Elastomer				
(B-2) Polyester-series	10		10	
(B-3) Polystyrene-series		10		10
(C) PC-series resin				
(C-1) L-1225	25	25	25	25
(D) Plasticizer				
(D-1) UL100	4	2	4	2
Refractive index of plasticizer	1.48	1.48	1.48	1.48
(E) Filler or reinforcing agent				
(E-1) Glass fiber	60	60	60	60
Maximum light transmittance (%)	34	27	18	18
Minimum light transmittance (%)	30	24	15	15
Fluctuation range of light transmittance (%)	4	3	3	3
Airtightness	Good	Good	Poor	Poor

**EVALUATION**

As apparent from the above results, the light transmittance and the airtightness of Comparative Examples A and B are low.

I hereby declare that all statements made herein  
of my own knowledge are true and that all statements  
made on information and belief are believed to be  
true; and further that these statements were made with  
5 the knowledge that willful false statements and the  
like so made are punishable by fine or imprisonment,  
or both, under Section 1001 of Title 18 of the United  
States Code and that such willful false statements may  
jeopardize the validity of the application or any  
10 patent issued thereon.

Signed this /2 day of January, 2010

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Kouichi Sakata

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